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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,646	07/06/2001	Gregory W. Purdom	L3-008	7723

7590

09/23/2003

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EXAMINER

OLIVA, CARMELO B

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 09/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,646

Applicant(s)

PURDOM, GREGORY W.

Examiner

Carmelo Oliva

Art Unit

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-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-88 and 112-141 is/are pending in the application.
- 4a) Of the above claim(s) 1-88, 112-119 and 137-141 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 120-136 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 120,121 and 123-136 are rejected under 35 U.S.C. 102(b) as being anticipated by Purdom (US 5,750,925).

Regarding claim 120, Purdom '925 discloses a boiler in Fig. 1B, comprising:
a containment compartment 106 for containing a thermal mass 108; and
a protective compartment 107 within which a memory module 109 is located.

The "means for protecting said memory module from temperatures on the order of 260° C for approximately ten hours" invokes 35 U.S.C. 112, sixth paragraph, which states:

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An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Therefore, if the corresponding structure is shown, the limitation is covered by the prior art. The corresponding structure in the instant case is means for interconnecting, when open, provides a passageway for the thermal mass to flow between the containment compartment and the protective compartment. Purdom discloses a passageway 135 that allows the thermal mass to flow, as shown in Fig. 1B (also col. 10, lines 46-49).

Regarding claim 121, the module includes solid state BGA memory (col. 7, line 5).

Regarding claim 123, the boiler includes a cover plate 101.

Regarding claim 124, the cover plate is press fit as shown in Fig. 1B.

Regarding claim 125, the thermal mass is a PCM (col. 7, lines 62-67).

Regarding claim 126, the PCM utilizes the energy absorption from vaporization to absorb heat (col. 7, lines 62-67).

Regarding claim 127, the PCM is water (co. 7, lines 62-67).

Regarding claim 128, the water is contained in a dry material (col. 8, lines 1-8).

Regarding claim 129, the dry material is sponge, silica, polyacrylamide, calcium silicate or pottery clay (col. 8, lines 1-8).

Regarding claim 130, the thermal mass is a dry powder formed by combining water and silica (col. 8, lines 1-8).

Regarding claim 131, the thermal mass absorbs shock (col. 8, lines 12-14).

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Regarding claim 132, the thermal mass is a gel formed by combining water and polyacrylamide (col. 8, lines 1-8).

Regarding claim 133, the boiler includes a fusible valve that opens at a predetermined temperature to allow the thermal mass to flow through (col. 8, lines 23-27).

Regarding claim 134, the valve is a thermal vent plug which is released at a predetermined temperature (col. 8, lines 23-27).

Regarding claim 135, the thermal vent plug is wax, paraffin, a bismuth alloy, or solder (col. 8, lines 30-32).

Regarding claim 136, Purdom '925 discloses a boiler in Fig. 1B, comprising:

a containment compartment 106 for containing a thermal mass 108;

a protective compartment 107 within which a memory module 109 is located; and
means for interconnecting the compartments 135.

The boiler includes a cover plate 101, which inherently adds structural integrity to the compartment since it is connected thereto, and defining a hole spaced apart from its edge and completely bound by the cover plate. As shown in both Figs. 1A and 1B, the cover plate 101 extends on either side of the hole for the cable 113 and bounds the hole. The memory module 109 is coupled to the cable 113 which extends through the hole.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 122 rejected under 35 U.S.C. 103(a) as being unpatentable over Purdom '925 in view of Purdom et al. (US 5,841,638).

Regarding claim 122, Purdom '925 discloses a boiler within a hardened voyage recorder as applied to claim 120 above, however the memory module does not include a stacked memory. Purdom et al. '638 teaches a hardened voyage recorder having stacked memory chips. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a stack of memory chips as taught by Purdom et al. '638 in order to reduce memory volume required for housing a data recording device (col. 1, lines 9-11).

Response to Arguments

6. Applicant's arguments filed June 24, 2003 have been fully considered but they are not persuasive.

In response to the applicant's argument that the applicant's invention is drawn to a marine voyage recorder and Purdom is drawn to a flight recorder, the structures are in the same field of endeavor, serve the same purpose and have similar structure, therefore it is reasonable to use a flight recorder structure in a rejection against the

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applicant's invention. Further, structural difference between the two must be present in the claim to show patentability.

In response to the applicant's argument that the "protect said memory module from temperatures on the order of 260° C for approximately ten hours" limitation should have been examined pursuant to 35 U.S.C. 112, sixth paragraph, the examiner disagrees since the corresponding structure (means for interconnecting, when open, provides a passageway for said thermal mass to flow between said containment compartment and said protective compartment) was present within the claims. As the examiner stated in the original rejection, the "means for protecting said memory module from temperatures on the order of 260° C for approximately ten hours" limitation is an intended use or result of the claimed structure and does not further limit the subject matter of the claim, therefore the limitation was not considered.

Also, the 35 U.S.C. 112, sixth paragraph states that the "claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof". Therefore, the applicant's exact structure is not needed, only an equivalent structure must be shown. Since data recorder of Purdom has similar structure (interconnection means which includes a passageway that, when open, allows for the thermal mass to flow between the containment compartment and the protective compartment) and serves a similar purpose (see col. 1, lines 54-56) as the applicant's invention, it can be considered an equivalent structure thereof.

Conclusion


7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carmelo Oliva whose telephone number is (703)305-0835. The examiner can normally be reached flexible hours on Monday through Friday with every other Wednesday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard, can be reached on (703)308-3682. The fax phone number for this Group is (703) 305-3431 for regular communications, and (703) 305-1341 for after final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.


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